AK

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,564	11/14/2003	Orest W. Blaschuk	100086.418	6389

500 7590 01/25/2006

SEED INTELLECTUAL PROPERTY LAW GROUP PLLC
701 FIFTH AVE
SUITE 6300
SEATTLE, WA 98104-7092

EXAMINER	
HADDAD, MAHER M	

ART UNIT	PAPER NUMBER
1644	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/714,564	BLASCHUK ET AL.	
	Examiner	Art Unit	
	Maher M. Haddad	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25,39-68 and 94-101* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-25, 39-68 and 94-101* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-25, 39-68 and 94-101 are pending.

2. Restriction to one of the following inventions is required under 35 U.S.C. § 121:

   1. Claims 1-2, 5-15, 18, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 1 or conservative analogue thereof, wherein the peptide present within *a linear peptide*, classified in Class 530, subclasses 324-330.

   2. Claims 1, 3-15, 18, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 1 or conservative analogue thereof, wherein the peptide present in a *cyclic peptide*, classified in Class 530, subclasses 317.

   3. Claims 1-2, 5-15, 18, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 2 or conservative analogue thereof, wherein the peptide present within a *linear peptide*; classified in Class 530, subclasses 324-330.

   4. Claims 1, 3-15, 18, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 2 or conservative analogue thereof, wherein the peptide present in *a cyclic peptide*; classified in Class 530, subclasses 317.

   5. Claims 1 and 16, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 1 or conservative analogue thereof, **further** comprising **an antibody** that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO1 or SEQ ID NO: 2, classified in Class 530, subclasses 324-330 and 387.1.

   6. Claims 1 and 16, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 2 or conservative analogue thereof, **further** comprising **an antibody** that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO1 or SEQ ID NO: 2, classified in Class 530, subclasses 324-330 and 387.1.

   7. Claims 1 and 17, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 1 or conservative analogue thereof, **further** comprising a **cell adhesion recognition sequence** other than SEQ ID NO1 or SEQ ID NO: 2 and **an antibody** that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 1 or SEQ ID NO: 2, classified in Class 530, subclasses 324-330 and 387.1.

   8. Claims 1 and 17, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 2 or conservative analogue thereof, **further** comprising a **cell adhesion recognition sequence** other than SEQ ID NO1 or SEQ ID NO: 2 and **an antibody** that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 1 or SEQ ID NO: 2, classified in Class 530, subclasses 324-330 and 387.1

9. Claims 1, drawn to a cell adhesion modulating agent comprises antibody or antigen-binding fragment thereof that specifically binds SEQ ID NO: 1, classified in Class 530, subclass 387.9.

10. Claim 1, drawn to a cell adhesion modulating agent comprises antibody or antigen-binding fragment thereof that specifically binds SEQ ID NO:2; classified in 530, subclass 387.9.

11. Claims 1 and 16, drawn to a cell adhesion modulating agent comprises antibody or antigen-binding fragment thereof that specifically binds SEQ ID NO: 1, **further** comprising an **antibody** or antigen-binding fragments thereof that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 1 or SEQ ID NO: 2, classified in Class 530, subclass 387.9.

12. Claims 1 and 16, drawn to a cell adhesion modulating agent comprises antibody or antigen-binding fragment thereof that specifically binds SEQ ID NO:2, **further** comprising an **antibody** or antigen-binding fragments thereof that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 1 or SEQ ID NO: 2; classified in 530, subclass 387.9.

13. Claims 1 and 17, drawn to a cell adhesion modulating agent comprises antibody or antigen-binding fragment thereof that specifically binds SEQ ID NO: 1, **further** comprising a **cell adhesion recognition sequence** other than SEQ ID NO:1 or SEQ ID NO: 2 and **an antibody** that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 1 or SEQ ID NO: 2, classified in Class 530, subclass 387.9.

14. Claims 1 and 17, drawn to a cell adhesion modulating agent comprises antibody or antigen-binding fragment thereof that specifically binds SEQ ID NO:2, **further** comprising a **cell adhesion recognition sequence** other than SEQ ID NO:1 or SEQ ID NO: 2 and **an antibody** that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 1 or SEQ ID NO: 2; classified in 530, subclass 387.9.

15. Claim 1, drawn to a cell adhesion modulating agent comprises a *peptidomimetic* of SEQ ID NO: 1; classified in Class 530, subclass 387.3, and 391.1; Class 530, subclass 345.

16. Claims 1, drawn to a cell adhesion modulating agent comprises a *peptidomimetic* of SEQ ID NO: 2; classified in Class 530, subclass 345.

17. Claims 1 and 16, drawn to a cell adhesion modulating agent comprises a *peptidomimetic* of SEQ ID NO: 1, **further** comprising an **antibody** or antigen-binding fragments thereof that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 1 or SEQ ID NO: 2, classified in Class 530, subclass 387.9.

18. Claims 1 and 16, drawn to a cell adhesion modulating agent comprises a *peptidomimetic* of SEQ ID NO: 2, **further** comprising an **antibody** or antigen-binding fragments thereof that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 1 or SEQ ID NO: 2; classified in 530, subclass 387.9.

19. Claims 1 and 17, drawn to a cell adhesion modulating agent comprises a *peptidomimetic* of SEQ ID NO: 1, **further** comprising a **cell adhesion recognition sequence** other than SEQ ID NO:1 or SEQ ID NO: 2 and **an antibody** that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 1 or SEQ ID NO: 2, classified in Class 530, subclass 387.9.

20. Claims 1 and 17, drawn to a cell adhesion modulating agent comprises a *peptidomimetic* of SEQ ID NO: 2, **further** comprising a **cell adhesion recognition sequence** other than SEQ ID NO:1 or SEQ ID NO: 2 and **an antibody** that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 1 or SEQ ID NO: 2; classified in 530, subclass 387.9.

21. Claims 19-24, drawn to a method for modulating cell adhesion comprising contacting a cell that expresses a desmosamal cadherin with a cell adhesion modulating agent comprising SEQ ID NO:1 or conservative analogue thereof, classified in Class 435, subclass 7.1.

22. Claims 19-24, drawn to a method for modulating cell adhesion comprising contacting a cell that expresses a desmosamal cadherin with a cell adhesion modulating agent comprising SEQ ID NO:2 or conservative analogue thereof, classified in Class 435, subclass 7.1.

23. Claims 19-24, drawn to a method for modulating cell adhesion comprising contacting a cell that expresses a desmosamal cadherin with a cell adhesion modulating agent comprising *an antibody* that specifically binds SEQ ID NO:1 or conservative analogue thereof, classified in Class 435, subclass 7.1.

24. Claims 19-24, drawn to a method for modulating cell adhesion comprising contacting a cell that expresses a desmosamal cadherin with a cell adhesion modulating agent comprising *an antibody* that specifically binds SEQ ID NO:2 or conservative analogue thereof, classified in Class 435, subclass 7.1.

25. Claims 19-24, drawn to a method for modulating cell adhesion comprising contacting a cell that expresses a desmosamal cadherin with a cell adhesion modulating agent comprising a *peptidomimetic* of SEQ ID NO:1 or conservative analogue thereof, classified in Class 435, subclass 7.1.

26. Claims 19-24, drawn to a method for modulating cell adhesion comprising contacting a cell that expresses a desmosamal cadherin with a cell adhesion modulating agent

comprising a *peptidomimetic* of SEQ ID NO:2 or conservative analogue thereof, classified in Class 435, subclass 7.1.

27. Claim 25, drawn to a method for reducing the progression f a cancer in a mammal comprising administering a cell adhesion modulating agent comprising SEQ ID NO:1 or conservative analogue thereof, classified in Class 424, subclass 185.1.

28. Claim 25, drawn to a method for reducing the progression f a cancer in a mammal comprising administering a cell adhesion modulating agent comprising SEQ ID NO:2 or conservative analogue thereof, classified in Class 424, subclass 185.1.

29. Claim 25, drawn to a method for reducing the progression f a cancer in a mammal comprising administering a cell adhesion modulating agent comprising *an antibody* that specifically binds SEQ ID NO:1 or conservative analogue thereof, classified in Class 424, subclass 185.1.

30. Claim 25, drawn to a method for reducing the progression f a cancer in a mammal comprising administering a cell adhesion modulating agent comprising *an antibody* that specifically binds SEQ ID NO:2 or conservative analogue thereof, classified in Class 424, subclass 185.1.

31. Claim 25, drawn to a method for reducing the progression f a cancer in a mammal comprising administering a cell adhesion modulating agent comprising a *peptidomimetic* of SEQ ID NO:1 or conservative analogue thereof, classified in Class 424, subclass 185.1.

32. Claim 25, drawn to a method for reducing the progression f a cancer in a mammal comprising administering a cell adhesion modulating agent comprising a *peptidomimetic* of SEQ ID NO:2 or conservative analogue thereof, classified in Class 424, subclass 185.1.

33. Claims 39-40 and 43, drawn to a method for screening a candidate compound for the ability to modulate desmosomal cadherin-mediated cell adhesion, comprising comparing a three-dimensional structure of a candidate compound to a three-dimensional structure of a peptide comprising an amino acid sequence of SEQ ID NO: 1, classified in Class 435, subclass 7.1.

34. Claims 39-40 and 43, drawn to a method for screening a candidate compound for the ability to modulate desmosomal cadherin-mediated cell adhesion, comprising comparing a three-dimensional structure of a candidate compound to a three-dimensional structure of a peptide comprising an amino acid sequence of SEQ ID NO: 2, classified in Class 435, subclass 7.1.

35. Claims 41 and 44, drawn to a method for evaluating a peptidomimetic for the ability to modulate desmosomal cadherin-mediated cell adhesion comprising culturing cells that express a desmosomal cadherin in the present or absence of a peptideomimetic , wherein

the peptidomimetic has a 3D structure that is substantially similar to the 3D-structure of a peptide having an amino acid sequence of SEQ ID NO: 1, classified in Class 435, subclass 7.1.

36. Claims 41 and 44, drawn to a method for evaluating a peptidomimetic for the ability to modulate desmosomal cadherin-mediated cell adhesion comprising culturing cells that express a desmosomal cadherin in the present or absence of a peptideomimetic , wherein the peptidomimetic has a 3D structure that is substantially similar to the 3D-structure of a peptide having an amino acid sequence of SEQ ID NO: 2, classified in Class 435, subclass 7.1.

37. Claims 42 and 44, drawn to a method for evaluating a peptidomimetic for the ability to modulate desmosomal cadherin-mediated cell adhesion comprising contanction the epithelia surface of skin with a test marker in the presence and absence of a peptidomimetic, wherein the peptidomimetic has a 3D structure that is substantially similar to the 3D-structure of a peptide having an amino acid sequence of SEQ ID NO: 1, classified in Class 435, subclass 7.1.

38. Claims 42 and 44, drawn to a method for evaluating a peptidomimetic for the ability to modulate desmosomal cadherin-mediated cell adhesion comprising contanction the epithelia surface of skin with a test marker in the presence and absence of a peptidomimetic, wherein the peptidomimetic has a 3D structure that is substantially similar to the 3D-structure of a peptide having an amino acid sequence of SEQ ID NO: 2, classified in Class 435, subclass 7.1.

39. Claims 45-46, 49-59 and 62, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 5 or conservative analogue thereof, wherein the peptide present within *a linear peptide*, classified in Class 530, subclasses 324-330.

40. Claims 45, 47-59 and 62, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 5 or conservative analogue thereof, wherein the peptide present in a *cyclic peptide*, classified in Class 530, subclasses 317.

41. Claims 45-46, 49-59 and 62, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 6 or conservative analogue thereof, wherein the peptide present within a *linear peptide*; classified in Class 530, subclasses 324-330.

42. Claims 45, 47-59 and 62, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 6 or conservative analogue thereof, wherein the peptide present in *a cyclic peptide*; classified in Class 530, subclasses 317.

43. Claims 45 and 60, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 5 or conservative analogue thereof, **further** comprising **an antibody** that specifically binds to

a cell adhesion recognition sequence other than SEQ ID NO1 or SEQ ID NO: 6, classified in Class 530, subclasses 324-330 and 387.1.

44. Claims 45 and 60, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 6 or conservative analogue thereof, **further** comprising **an antibody** that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO1 or SEQ ID NO: 6, classified in Class 530, subclasses 324-330 and 387.1.

45. Claims 45 and 61, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 5 or conservative analogue thereof, **further** comprising a **cell adhesion recognition sequence** other than SEQ ID NO1 or SEQ ID NO: 6 and **an antibody** that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 5 or SEQ ID NO: 6, classified in Class 530, subclasses 324-330 and 387.1.

46. Claims 45 and 61, drawn to a cell adhesion modulating agent comprises SEQ ID NO: 6 or conservative analogue thereof, **further** comprising a **cell adhesion recognition sequence** other than SEQ ID NO1 or SEQ ID NO: 6 and **an antibody** that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 5 or SEQ ID NO: 6, classified in Class 530, subclasses 324-330 and 387.1

47. Claims 45, drawn to a cell adhesion modulating agent comprises antibody or antigen-binding fragment thereof that specifically binds SEQ ID NO: 5, classified in Class 530, subclass 387.9.

48. Claim 45, drawn to a cell adhesion modulating agent comprises antibody or antigen-binding fragment thereof that specifically binds SEQ ID NO: 6; classified in 530, subclass 387.9.

49. Claims 45 and 60, drawn to a cell adhesion modulating agent comprises antibody or antigen-binding fragment thereof that specifically binds SEQ ID NO: 5, **further** comprising an **antibody** or antigen-binding fragments thereof that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 5 or SEQ ID NO: 6, classified in Class 530, subclass 387.9.

50. Claims 45 and 60, drawn to a cell adhesion modulating agent comprises antibody or antigen-binding fragment thereof that specifically binds SEQ ID NO: 6, **further** comprising an **antibody** or antigen-binding fragments thereof that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 5 or SEQ ID NO: 6; classified in 530, subclass 387.9.

51. Claims 45 and 61, drawn to a cell adhesion modulating agent comprises antibody or antigen-binding fragment thereof that specifically binds SEQ ID NO: 5, **further** comprising a **cell adhesion recognition sequence** other than SEQ ID NO: 5 or SEQ ID

NO: 6 and **an antibody** that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 5 or SEQ ID NO: 6, classified in Class 530, subclass 387.9.

52. Claims 45 and 61, drawn to a cell adhesion modulating agent comprises antibody or antigen-binding fragment thereof that specifically binds SEQ ID NO: 6, **further** comprising a **cell adhesion recognition sequence** other than SEQ ID NO: 5 or SEQ ID NO: 6 and **an antibody** that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 5 or SEQ ID NO: 6; classified in 530, subclass 387.9.

53. Claim 45, drawn to a cell adhesion modulating agent comprises a *peptidomimetic* of SEQ ID NO: 5; classified in Class 530, subclass 387.3, and 391.1; Class 530, subclass 345.

54. Claims 45, drawn to a cell adhesion modulating agent comprises a *peptidomimetic* of SEQ ID NO: 6; classified in Class 530, subclass 345.

55. Claims 45 and 60, drawn to a cell adhesion modulating agent comprises a *peptidomimetic* of SEQ ID NO: 5, **further** comprising an **antibody** or antigen-binding fragments thereof that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 5 or SEQ ID NO: 6, classified in Class 530, subclass 387.9.

56. Claims 45 and 60, drawn to a cell adhesion modulating agent comprises a *peptidomimetic* of SEQ ID NO: 6, **further** comprising an **antibody** or antigen-binding fragments thereof that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 5 or SEQ ID NO: 6; classified in 530, subclass 387.9.

57. Claims 45 and 61, drawn to a cell adhesion modulating agent comprises a *peptidomimetic* of SEQ ID NO: 5, **further** comprising a **cell adhesion recognition sequence** other than SEQ ID NO: 5 or SEQ ID NO: 6 and **an antibody** that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 5 or SEQ ID NO: 6, classified in Class 530, subclass 387.9.

58. Claims 45 and 61, drawn to a cell adhesion modulating agent comprises a *peptidomimetic* of SEQ ID NO: 6, **further** comprising a **cell adhesion recognition sequence** other than SEQ ID NO: 5 or SEQ ID NO: 6 and **an antibody** that specifically binds to a cell adhesion recognition sequence other than SEQ ID NO: 5 or SEQ ID NO: 6; classified in 530, subclass 387.9.

59. Claims 63-67, drawn to a method for modulating cell adhesion comprising contacting a cell that expresses a desmosamal cadherin with a cell adhesion modulating agent comprising SEQ ID NO: 5 or conservative analogue thereof, classified in Class 435, subclass 7.1.

60. Claims 63-67, drawn to a method for modulating cell adhesion comprising contacting a cell that expresses a desmosamal cadherin with a cell adhesion modulating agent

comprising SEQ ID NO: 6 or conservative analogue thereof, classified in Class 435, subclass 7.1.

61. Claims 63-67, drawn to a method for modulating cell adhesion comprising contacting a cell that expresses a desmosamal cadherin with a cell adhesion modulating agent comprising *an antibody* that specifically binds SEQ ID NO: 5 or conservative analogue thereof, classified in Class 435, subclass 7.1.

62. Claims 63-67, drawn to a method for modulating cell adhesion comprising contacting a cell that expresses a desmosamal cadherin with a cell adhesion modulating agent comprising *an antibody* that specifically binds SEQ ID NO: 6 or conservative analogue thereof, classified in Class 435, subclass 7.1.

63. Claims 63-67, drawn to a method for modulating cell adhesion comprising contacting a cell that expresses a desmosamal cadherin with a cell adhesion modulating agent comprising a *peptidomimetic* of SEQ ID NO: 5 or conservative analogue thereof, classified in Class 435, subclass 7.1.

64. Claims 63-67, drawn to a method for modulating cell adhesion comprising contacting a cell that expresses a desmosamal cadherin with a cell adhesion modulating agent comprising a *peptidomimetic* of SEQ ID NO: 6 or conservative analogue thereof, classified in Class 435, subclass 7.1.

65. Claim 68, drawn to a method for reducing the progression f a cancer in a mammal comprising administering a cell adhesion modulating agent comprising SEQ ID NO: 5 or conservative analogue thereof, classified in Class 424, subclass 185.1.

66. Claim 68, drawn to a method for reducing the progression f a cancer in a mammal comprising administering a cell adhesion modulating agent comprising SEQ ID NO: 6 or conservative analogue thereof, classified in Class 424, subclass 185.1.

67. Claim 68, drawn to a method for reducing the progression f a cancer in a mammal comprising administering a cell adhesion modulating agent comprising *an antibody* that specifically binds SEQ ID NO: 5 or conservative analogue thereof, classified in Class 424, subclass 185.1.

68. Claim 68, drawn to a method for reducing the progression f a cancer in a mammal comprising administering a cell adhesion modulating agent comprising *an antibody* that specifically binds SEQ ID NO: 6 or conservative analogue thereof, classified in Class 424, subclass 185.1.

69. Claim 68, drawn to a method for reducing the progression f a cancer in a mammal comprising administering a cell adhesion modulating agent comprising a *peptidomimetic*

of SEQ ID NO: 5 or conservative analogue thereof, classified in Class 424, subclass 185.1.

70. Claim 68, drawn to a method for reducing the progression f a cancer in a mammal comprising administering a cell adhesion modulating agent comprising a *peptidomimetic* of SEQ ID NO: 6 or conservative analogue thereof, classified in Class 424, subclass 185.1.

71. Claims 94-95 and 100, drawn to a method for screening a candidate compound for the ability to modulate cell adhesion, comprising comparing a three-dimensional structure of a candidate compound to a three-dimensional structure of a peptide comprising an amino acid sequence of SEQ ID NO: 5, classified in Class 435, subclass 7.1.

72. Claims 94-95 and 100, drawn to a method for screening a candidate compound for the ability to modulate cell adhesion, comprising comparing a three-dimensional structure of a candidate compound to a three-dimensional structure of a peptide comprising an amino acid sequence of SEQ ID NO: 6, classified in Class 435, subclass 7.1.

73. Claims 96-97 and 101, drawn to a method for evaluating a peptidomimetic for the ability to modulate cell adhesion comprising culturing neurons that express a atypical cadherin in the present or absence of a peptideomimetic , wherein the peptidomimetic has a 3D structure that is substantially similar to the 3D-structure of a peptide having an amino acid sequence of SEQ ID NO: 5, classified in Class 435, subclass 7.1.

74. Claims 96-97 and 101, drawn to a method for evaluating a peptidomimetic for the ability to modulate cell adhesion comprising culturing cells that express a atypical cadherin in the present or absence of a peptideomimetic , wherein the peptidomimetic has a 3D structure that is substantially similar to the 3D-structure of a peptide having an amino acid sequence of SEQ ID NO: 6, classified in Class 435, subclass 7.1.

75. Claims 98 and 101, drawn to a method for evaluating a peptidomimetic for the ability to modulate atypical cadherin-mediated cell adhesion comprising contacting the epithelia surface of skin with a test marker in the presence and absence of a peptidomimetic, wherein the peptidomimetic has a 3D structure that is substantially similar to the 3D-structure of a peptide having an amino acid sequence of SEQ ID NO: 5, classified in Class 435, subclass 7.1.

76. Claims 98 and 101, drawn to a method for evaluating a peptidomimetic for the ability to modulate atypical cadherin-mediated cell adhesion comprising contacting the epithelia surface of skin with a test marker in the presence and absence of a peptidomimetic, wherein the peptidomimetic has a 3D structure that is substantially similar to the 3D-structure of a peptide having an amino acid sequence of SEQ ID NO: 6, classified in Class 435, subclass 7.1.

77. Claims 99 and 101, drawn to a method for evaluating a peptidomimetic for the ability to modulate atypical cadherin-mediated cell adhesion comprising contacting a blood vessel with a peptidomimetic, wherein the peptidomimetic has a 3D structure that is substantially similar to the 3D-structure of a peptide having an amino acid sequence of SEQ ID NO: 5, classified in Class 435, subclass 7.1.

78. Claims 99 and 101, drawn to a method for evaluating a peptidomimetic for the ability to modulate atypical cadherin-mediated cell adhesion comprising contacting a blood vessel with a peptidomimetic, wherein the peptidomimetic has a 3D structure that is substantially similar to the 3D-structure of a peptide having an amino acid sequence of SEQ ID NO: 6, classified in Class 435, subclass 7.1.

3. Groups 1-20 and 39-58 are different products. Peptidomimetics, peptides and antibodies to the peptides differ with respect to their structures and physicochemical properties; therefore each product is patentably distinct.

4. Groups 21-38 and 59-78 are different methods. A method of detecting and a method of treating differ with respect to ingredients, method steps, and endpoints; therefore, each method is patentably distinct.

5. Groups 1-20/21-38 and 39-58/59-78 are related as product and process of using. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the antibody of Groups 9-14 and 47-52 can be used for affinity purification, in addition to the methods of modulating and reducing recited. Further, the peptide of Groups 1-8 and 39-46 can be used for affinity purification, in addition to the various methods recited. Further, the peptidomimetic of Groups 15-20 and 53-58 can be used to construct peptidomimetic libraries, in addition to the various methods recited.

6. These inventions are distinct for the reasons given above. In addition, they have acquired a separate status in the art as shown by different classification and/or recognized divergent subject matter. Further, even though in some cases the classification is shared, a different field of search would be required based upon the structurally distinct products recited and the various methods of use comprising distinct method steps. Therefore restriction for examination purposes as indicated is proper. Further, a prior art search also requires a literature search. It is an undue burden for the examiner to search more than one invention.

Species Election

7. Irrespective of whichever group applicant may elect, applicant is further required under 35 US 121 (1) to elect a single disclosed species to which claims would be restricted if no generic claim is finally held to be allowable and (2) to list all claims readable thereon including those subsequently added.

A. If Group 1 or 2 is elected, applicant is required to elect a single Trp-containing cell adhesion recognition sequence such as those recited in claims 7 and 8. These sequences are distinct species because their structures and physiochemical structure is different, thus each sequence represents patentably distinct subject matter.

B. If Group 33 or 34 is elected, applicant is required to elect a single Trp-containing cell adhesion recognition sequence such as those recited in claims 51 and 52. These sequences are distinct species because their structures and physiochemical structure is different, thus each sequence represents patentably distinct subject matter.

Applicant is required under 35 U.S.C. § 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

8. Applicant is advised that a response to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 C.F.R. § 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. M.P.E.P. § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. § 103 of the other invention.

9. Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed.

10. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. **Process claims that depend from or otherwise include all the limitations of the patentable product** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined. See "Guidance on Treatment of Product and Process Claims in light of *In re Ochiai, In re Brouwer* and 35 U.S.C. § 103(b)," 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

12. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maher Haddad whose telephone number is (571) 272-0845. The examiner can normally be reached Monday through Friday from 7:30 am to 4:00 pm. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (571) 272-0841. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 18, 2006

Maher Haddad

Maher Haddad, Ph.D.
Patent Examiner
Technology Center 1600